

WHAT IS CLAIMED IS:

1. An optical disk recording method comprising:  
deriving a recording condition of old data recorded on  
a rewritable optical disk by reproducing the old data or from  
5 a reproduced waveform;  
deciding an overwriting recording condition to overwrite  
new data on the old data recorded under the recording condition  
of the old data; and  
overwriting the new data on the old data according to the  
10 decided overwriting recording condition.
2. The optical disk recording method according to claim 1,  
wherein the recording condition of the old data is derived upon  
an instruction to overwrite the new data on old data recorded  
15 on the rewritable optical disk.
3. An optical disk recording method comprising:  
detecting a crosstalk amount from a reproduced signal of  
old data recorded on a rewritable optical disk;  
20 setting a recording condition based on the detected  
crosstalk amount; and  
overwriting new data according to the recording  
condition.
- 25 4. The optical disk recording method according to claim 3,  
wherein the crosstalk amount is detected upon an instruction  
to overwrite the new data on old data recorded on the rewritable  
optical disk.

5. The optical disk recording method according to claim 3,  
wherein the recording condition is set in response to a  
difference between the detected crosstalk amount and a  
5 reference crosstalk amount.

6. The optical disk recording method according to claim 5,  
wherein an optimum recording power is decided by applying a  
trial writing onto a trial writing area of the rewritable  
10 optical disk, and the reference crosstalk amount is detected  
based on a reproduced signal of data that are recorded at the  
optimum recording power.

7. An optical disk recording method comprising:  
15 acquiring a peak-to-peak value of a reproduced signal of  
old data recorded on a rewritable optical disk;  
setting a recording condition based on the peak-to-peak  
value; and  
overwriting new data according to the recording  
20 condition.

8. The optical disk recording method according to claim 7,  
wherein the peak-to-peak value is acquired upon an instruction  
to overwrite the new data on old data recorded on the rewritable  
25 optical disk.

9. The optical disk recording method according to claim 7,  
wherein an optimum recording power is decided by applying a

trial writing onto a trial writing area of the rewritable optical disk, and the recording condition is set in response to a difference between the peak-to-peak value of the reproduced signal of data recorded at the optimum recording power and the peak-to-peak value of the reproduced signal of the old data.

10. An optical disk recording method comprising:

applying a trial writing while changing a laser power irradiated onto a trial writing area of a rewritable optical disk by a predetermined amount;

deciding an optimum recording power based on a reproduced signal of trial-written data;

acquiring a first peak-to-peak value based on a peak value and a bottom value of a reproduced signal of data recorded at the optimum recording power;

acquiring a second peak-to-peak value based on a peak value and a bottom value of a reproduced signal of old data recorded on the rewritable optical disk; and

correcting an erasing power of a laser beam irradiated onto the rewritable optical disk in response to a difference between the first and second peak-to-peak values, and overwriting the new data by applying a corrected erasing power.

11. The optical disk recording method according to claim 10, wherein the trial writing is applied upon an instruction to overwrite the new data on old data recorded on the rewritable optical disk.

12. An optical disk recording system comprising:  
a reproducing unit which reproduces data recorded on a rewritable optical disk;  
a crosstalk detecting unit which detects a crosstalk  
5 amount from a reproduced signal of the reproducing unit;  
a recording-condition setting unit which sets a recording condition based on the crosstalk amount detected by the crosstalk detecting unit; and  
a recording unit which overwrites new data on old data  
10 according to the recording condition set by the recording-condition setting unit.

13. An optical disk recording system comprising:  
a reproducing unit which reproduces data recorded on a  
15 rewritable optical disk;  
an envelope detecting unit which acquires a peak-to-peak value of a reproduced signal of the reproducing unit;  
a recording-condition setting unit which sets a recording condition based on the peak-to-peak value acquired by the  
20 envelope detecting unit; and  
a recording unit which overwrites new data on old data according to the recording condition set by the recording-condition setting unit.